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THE NORTH AMERICAN SPECIES OF *ACTIA* IN THE AMERICAN MUSEUM OF NATURAL HISTORY

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A review of the North American species of *Actia* Desvoidy is presented in the following pages. The identification of species belonging to this genus has been difficult owing to the confusion existing in regard to the determination of the described species and the recognition of the genus *Thryptocera* Macquart. In this genus the presence or absence of bristles on the first vein is of no more than specific value and for this reason *Thryptocera*, or more correctly, *Ceranthia* Desvoidy, is not tenable. In *Actia* the bristles of the dorsum of the thorax are depressed and in all the species I have seen there are four pairs of postsutural dorsocentrals (Coquillett described *atripes* as having only three pairs); there are three sternopleural bristles, and the proboscis is at most slightly longer than the head and bears large labellae. In some exotic species the apical cross-vein is absent, while in others the third antennal segment of the male is greatly modified.

Unless otherwise stated the types of the new species are in The American Museum of Natural History.

Following is the generic synonymy in so far as reference to American species is concerned.

Actia Desvoidy

DESVOIDY, 1830, Mem. Acad. Roy. Sc. Inst. France, II, p. 85.
Ceromya DESVOIDY, 1830, Mem. Acad. Roy. Sc. Inst. France, II, p. 86.
Ceranthia DESVOIDY, 1830, Mem. Acad. Roy. Sc. Inst. France, II, p. 88.
Thryptocera MACQUART, 1834, Soc. Sci. Lille, (1833), p. 310.
Gymnophthalma LIOY, 1864, Atti Inst. Ven., (3) IX, p. 1341.
Polychætoneura WALTON, 1914, Proc. Ent. Soc. Wash., XI, p. 90.

The exact status of *Actia* Desvoidy must remain in doubt until the type species, *cingulata* Desvoidy, has been definitely identified. The designation of *cingulata* as type of the genus is most unfortunate as the species has not been recognized since its description and it may well be that it does not conform to our present conception of the genus. On the other hand *A. pilipennis* Desvoidy (not Fallén) is known to be a synonym of *lamia* Meigen. It is further significant that the genus was based on species lacking the apical cross-vein, a character possessed by

only a few forms now included. According to the original description of *A. cingulata* the veins are not bristled, a character not found in any of the known species at present included in the genus and it seems most likely that the recognition of *cingulata* will prove that *Actia* is not properly interpreted at the present time. However, I use the name pending more light on the question.

TABLE OF SPECIES

1.—Fifth vein bristled....8.
Fifth vein bare....2.
2.—First vein bristled on at least the apical section....5.
First vein bare....3.
3.—Legs yellowish....4.
Legs black....*atripes* Coquillett.
4.—Penultimate aristal segment half as long as the terminal segment. *flavipes* Coquillett.
Penultimate aristal segment not twice as long as wide....*panamensis*, n. sp.
5.—First vein bristled on apical section only....*palloris* Coquillett.
First vein bristled beyond the humeral cross-vein....6.
6.—Abdomen with the sides very broadly yellow....*ontario*, n. sp.
Abdomen black, the segmental incisures at most very narrowly reddish....7.
7.—Abdomen shining except the very narrow segmental bases..*nitidiventris*, n. sp.
Abdominal pollen extending to beyond the middle of the second to fourth segments....*diffidens*, n. sp.
8.—Abdomen black in ground color....9.
Abdomen very broadly reddish yellow laterally....*americana* Townsend.
9.—Abdominal pollen sharply defined and occupying at most the basal third of the segments....*interrupta*, n. sp.
Abdominal pollen extending to beyond the basal half of the segments and not sharply defined....10.
10.—Proboscis short, the labellae very broad....*diffidens*, n. sp.
Proboscis long and slender, the labellae slender and elongate; apical cross-vein absent in female....*autumnalis* Townsend.

Actia atripes Coquillett

Thryptocera atripes COQUILLETT, 1897, 'Rev. Tachinidae,' p. 58.

A. atripes may be readily recognized by the absence of bristles on the first vein, black femora and yellow sides of the abdomen. I have not seen the species and apparently it has not been recorded since it was described from a single female from New Bedford, Mass.

Actia flavipes Coquillett

Thryptocera flavipes COQUILLETT, 1897, 'Rev. Tachinidae,' p. 58.

Black and yellowish, the thorax thickly pollinose. Length, about 4 mm.

FEMALE.—Face and cheeks yellow in ground color, the front and occiput black; frontal vitta reddish yellow. Front slightly longer than wide, with brownish-

yellow pollen except on the median vitta. Occiput with cinereous, the face and cheeks with white pollen. Apical section of proboscis about three-fourths as long as the head-height; cheeks one-fourth as wide as the eye-height. Antennae reddish, the third segment unusually large for a female and mostly brownish; arista practically bare, thickened on almost the basal three-fourths, the penultimate segment almost half as long as the apical.

Thorax black in ground color, cinereous pollinose, the humeri and scutellum yellowish, the latter more or less brown basally in the middle. Hypopleura with only one or two hairs in addition to the fine bristle.

Legs reddish yellow, the tarsi black; all the coxae pale.

Wings cinereous hyaline, first and fifth veins without bristles, the third bristled almost to the anterior cross-vein. Squamae large, whitish, with brownish tinge in some lights.

Basal two abdominal segments reddish yellow, the first with a wide median brown vitta, the second with a large, median blackish triangle; third and fourth segments black in ground color, the bases more or less yellowish. Abdominal pollen whitish, limited to the basal half of the second segment, extending to well beyond the middle on the third and fourth segments, dense basally on the segments, thinner apically because the hairs and bristles arise from bare spots. Venter much more extensively yellow.

Female, Station for the Study of Insects, Tuxedo, New York, July 5, 1928 (Curran).

Actia panamensis, new species

Mostly yellowish; first and fifth veins bare; front narrow. Length, 4.5 mm.

FEMALE.—Head yellow in ground color, the upper half of the occiput black; pollen white, yellow on the front and upper half of the occiput. Frontal vitta reddish yellow, darker posteriorly; front twice as long as wide; cheeks about one-twelfth as wide as the eye-height. Proboscis short, yellowish, the labellae larger. Palpi long and swollen. Antennae reddish yellow, the third segment mostly brown, three times as long as wide; arista brown, the penultimate segment little longer than wide.

Thorax yellowish, the disk of the mesonotum brownish in ground color; pollen yellowish on the dorsum, whitish on the pleura. Pteropleura with several hairs.

Legs yellowish, the tarsi blackish.

Wings cinereous hyaline, third vein bristled almost to the small cross-vein. Squamae whitish, with cinereous tinge. Halteres yellow.

Abdomen shining yellowish; second and third segments each with a median triangular blackish spot behind and a dark spot on either side, the fourth with an indistinct median triangle behind. Venter wholly yellow.

TYPE.—Female, Barro Colorado Island, Canal Zone, December 23, 1928 (Curran).

Actia palloris Coquillett

Lasioneura palloris COQUILLETT, 1895, Journ. N. Y. Ent. Soc., III, p. 50.
Actia palloris COQUILLETT, 1897, 'Rev. Tachinidae,' p. 58.

This species is wholly yellowish except for the brownish tarsi and brownish or blackish markings on the third and fourth abdominal segments. It is readily recognized by the absence of bristles on the fifth vein and their presence on only the apical section of the first vein. It is recorded from New Hampshire, Vermont, and Maine.

Actia ontario, new species

Thorax black, the abdomen partly reddish yellow; legs reddish yellow; first vein bristled on most of its length, the fifth bare. Length, 4.5 to 5.5 mm.

FEMALE.—Head yellow, upper three-fifths of the occiput blackish in ground color, the parafrontals brownish on the upper half; pollen whitish. Frontal vitta pale reddish yellow. Cheeks one-fourth as wide as the eye-height. Proboscis reddish brown, the ultimate section not as long as the length of the head. Antennae reddish, the third segment tinged with brown on the apical half or more, more than half as wide as long; arista yellowish, with the apical third brown, thickened on the basal half, the penultimate segment about twice as long as wide.

Thorax black in ground color, cinereous pollinose, the humeri and scutellum brownish yellow, the former sometimes black, the scutellum with a transverse black basal spot.

Legs reddish yellow, the tarsi darkened.

Wings cinereous hyaline. First vein bristled beyond the humeral cross-vein, the bristles of equal length; third vein bristled to beyond the posterior cross-vein, the fifth bare. Squamae white; halteres pale yellow.

Abdomen reddish yellow, sometimes with only a median brown vitta on the second and third segments, or with the fourth segment mostly blackish and the third with a black triangle extending broadly to the lateral margins behind and to the base of the segment in the middle, the second with median brownish vitta. Pollen thin, whitish, occupying the basal three-fourths of the apical three segments, dense at the bases of the segments, the hairs and bristles arising from bare spots.

TYPES.—Holotype, female, Norway Point, Lake of Bays, Ontario, July 31, 1919 (J. McDunnough), in Canadian National Collection. Paratype, female, Orillia, Ontario, June 12, 1925 (Curran).

Actia nitidiventris, new species

Black, the thorax cinereous pollinose; abdomen almost wholly shining; first vein bristled on its whole length. Length, 5 mm.

FEMALE.—Head yellow, the upper two-thirds of the occiput and the parafrontals blackish in ground color; front and upper half of the occiput brownish yellow pollinose, the face and cheeks with white pollen. Front narrow, twice as long as wide; frontal vitta brownish red. Cheeks about one-sixth as wide as the eye-height. Proboscis brown, the apical section about as long as the length of the head; labellae large; palpi yellow, slightly enlarged apically. Antennae reddish, the third segment brown except at the base, three times as long as wide; arista thickened on the basal fourth, reddish on the basal third the penultimate segment but little longer than wide.

Thorax blackish or brown, cinereous yellow pollinose, the mesonotum with three broad, bare vittae in front; pleura with more or less reddish on the borders of the incisures; humeri and apical half of the scutellum reddish yellow.

Legs blackish, the coxae reddish brown, the anterior pair yellowish.

Wings cinereous hyaline, first vein with bristles of almost equal length beyond humeral cross-vein; third vein bristled to opposite the posterior cross-vein; fifth vein bare. Squamae with strong brownish tinge, the base and border white; halteres yellow.

Abdomen shining blackish, the tips of the first to third segments yellowish, the very narrow bases of the second to fourth segments whitish pollinose except in the middle, the ground color more or less yellowish beneath the pollen.

TYPE.—Female, Barro Colorado Island, Canal Zone, February 16, 1929 (Curran).

Actia diffidens, new species

Black, the abdominal pollen extensive but dense only on the basal fourth of the segments; first and third veins bristled, the fifth normally bare. Length, 4.5 to 5 mm.

MALE.—Head black in ground color, the face and cheeks, and sometimes the lowest sixth of the occiput, yellow; pollen cinereous, more whitish on the face and cheeks. Frontal vitta reddish yellow. Cheeks less than one-sixth as wide as the eye-height. Proboscis about as long as the head, the labellae large; palpi yellowish, very slightly clavate. Antennae reddish, the third segment mostly blackish, slightly more than twice as long as wide; arista thickened and brownish red on the basal half, black apically, the penultimate segment about four times as long as wide.

Thorax black, cinereous pollinose, the mesonotum with brownish tinge; apical border of the scutellum broadly yellowish.

Legs brown, the coxae and tibiae reddish brown to reddish, the anterior coxae always reddish.

Wings cinereous hyaline; first vein bristled beyond the humeral cross-vein, the bristles on the apical section finer and becoming shorter apically; third vein bristled to opposite the posterior cross-vein; fifth normally bare but sometimes with one or two inconspicuous bristles. Squamae with yellowish tinge; halteres yellow.

Abdomen black, cinereous white pollinose; first segment, a broad median vitta and the broad apices of the segments bare; basal fourth or more of the second to fourth segments thickly pollinose; hairs and bristles arising from bare spots.

FEMALE.—Third antennal segment a little smaller and more extensively reddish. Palpi larger and more clavate; femora sometimes mostly reddish.

TYPES.—Holotype, male, Kentville, Nova Scotia, June 17, 1924 (R. P. Gorham); allotype, female, St. Peters, Nova Scotia, July 10, 1930 (M. L. Prebble), in Canadian National Collection. Paratype, female, Chatham, New Brunswick, August 15, 1926 (F. Johansen).

A. diffidens bears a strong superficial resemblance to *A. infantula* Zetterstedt but has the first vein bristled beyond the humeral cross-vein whereas *infantula* bears only short, fine bristles on the apical section and also has a narrower front. I have seen no specimens of *infantula* from America.

Actia americana Townsend

Thryptocera americana TOWNSEND, 1892, Can. Ent., XXIV, p. 69.

Actia pilipennis COQUILLETT, 1897, 'Rev. Tachinidae,' p. 59 (in part).

Polychaetoneura elyii WALTON, 1914, Proc. Ent. Soc. Wash., XI, p. 91 (figs.).

Thryptocera americana JOHNSON, 1925, Occ. Papers Bost. Soc. Nat. Hist., VII, p. 186.

A. americana is the only Nearctic species of *Actia* known to me having the fifth vein bristled and the sides of the abdomen yellowish. It is

very similar to *ontario*, new species, but differs in the bristling of the fifth vein. Reported from Maine, Rhode Island, Connecticut and the District of Columbia.

Actia interrupta, new species

Actia pilipennis COQUILLETT, 1897, 'Rev. Tachinidae,' p. 69 (in part) (not Fallén).

Actia pilipennis JOHNSON, 1925, Occ. Papers Boston Soc. Nat. Hist., VII, p. 187 (not Fallén).

Actia americana CURRAN, 1930, Bull. Amer. Mus. Nat. Hist., LXI, p. 97 (not Townsend).

Closely related to *Actia pilipennis* Fallén but distinguished by the presence of shorter and finer bristles on the apical section of the first vein and more clearly reddish basal antennal segments. In *pilipennis* the bristles on the third vein are equally strong on the whole length and the basal antennal segments in the male are only obscurely reddish, usually brown, and they are brownish red in the female. I have seen no specimen of *pilipennis* from North America but have an excellent series collected by Mr. W. J. Wainwright in England.

Black with cinereous pollen, the tibiae more or less reddish. Length, 4.5 to 5 mm.

MALE.—Head black in ground color, the face, cheeks, and lowest fifth of the occiput yellow; pollen cinereous; frontal vitta reddish. Cheeks about one-fifth as wide as the eye-height. Proboscis brown, the ultimate section about as long as the head; palpi yellow, slightly clavate. Antennae very large, the third segment one-third narrower than long, widest near the basal third, mostly blackish, but the base and lower edge broadly reddish, the basal segments reddish; arista thickened on the basal two-thirds, reddish on the basal half, the penultimate segment four times as long as wide.

Thorax black in ground color, cinereous pollinose, the mesonotal pollen more yellowish; apex of scutellum broadly yellow.

Legs blackish; coxae brown, the anterior pair more or less reddish yellow.

Wings cinereous hyaline, the first vein bristled on its whole length, the bristles on the apical section finer and decreasing in length toward the costa; third vein bristled on most of its length, the fifth almost to the posterior cross-vein. Squamae tinged with brown.

Abdomen shining black, the second to fourth segments each bearing a broadly interrupted basal whitish pollinose fascia, the pale band occupying little more than the basal fourth of the segments.

FEMALE.—Palpi larger and more strongly clavate; third antennal segment almost three times as long as wide, more extensively reddish. Squamae more grayish. Coxae brownish red.

TYPES.—Holotype, male, Station for the Study of Insects, Tuxedo, New York, July 27, 1928; allotype, female, same locality, July 6, 1928 (Curran). Paratypes: male and female, same locality, July 15 and 27, 1928 (Curran); male, Franconia, New Hampshire; female, Mt. Washington, New Hampshire; male and three females, St.

Marys, British Columbia, July 12, 1926 (A. A. Dennys); male, Banff, Alberta, August 12, 1922 (C. B. D. Garrett). Paratypes in the Canadian National Collection.

Actia ? autumnalis Townsend

Actiopsis autumnalis TOWNSEND, 1916, 'Ins. Ins. Mens.,' IV, p. 122.

This species should apparently be referred to *Siphona* Meigen (*Bucentes* Latreille) because of the slender labellae, but it forms a connecting link between the two genera. The proboscis in both genera varies in length but there is much less variation in *Actia* than is shown in *Siphona*. I have seen only females of *autumnalis* and the fourth vein in all of them is evanescent beyond the bend, the apical cross-vein being absent.